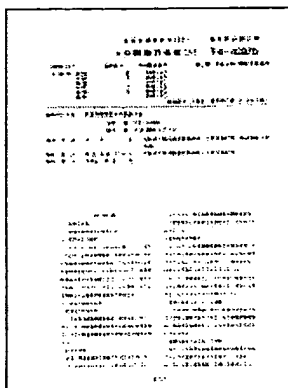


[Print-Friendly](#)**Title:****PRODUCTION OF LIGHTWEIGHT INORGANIC PRODUCT****Abstract:**

**PURPOSE:** To achieve lightweight while maintaining the strength by replacing part of an inorganic lightweight expanded aggregate with fly ash having 0.5 bulk specific gravity in cement blend of a lightweight inorganic product.

**CONSTITUTION:** Equal amounts of cement and quartz sand are blended with required reinforcing fiber, a filler and an inorganic lightweight expanded aggregate (perlite, silas balloon, etc.). In the blend of the aforementioned inorganic product, the above-mentioned inorganic lightweight expanded aggregate in an amount of (1/4) to (1/2) based on the total amount thereof is replaced with fly ash having 0.5 bulk specific gravity. The aforementioned fly ash is sufficiently made to reacted with cement grains to form a firm matrix in a state surrounding the expanded aggregate and contribute to the reduction of weight.

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**Assignee:****KUBOTA KK****Inventor:****YOSHII TADASHI****Publication Date:** 1992-02-13**Application Date:** 1990-06-07**Cites:** 0**Cited By:** 1**Intl Class:**

[<sup>5</sup>]C04B003808; [<sup>5</sup>]C04B001404; [<sup>5</sup>]C04B001418;  
[<sup>5</sup>]C04B001602; [<sup>5</sup>]C04B001808; [<sup>5</sup>]C04B002804

**Core:** C04B001402 [2006-01]; C04B001600 [2006-01];  
C04B001804 [2006-01]; C04B002800 [2006-01];  
C04B003808 [2006-01]

**Adv:** C04B001404 [2006-01]; C04B001418 [2006-01];  
C04B001602 [2006-01]; C04B001808 [2006-01];  
C04B002804 [2006-01]; C04B003808 [2006-01]

**ECLA:****US Class:****Field of Search:**

## **JP4042875A PRODUCTION OF LIGHTWEIGHT INORGANIC PRODUCT**

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FIBER-REINFORCED LIGHTWEIGHT CEMENT

COMPOSITION

PURPOSE: To improve formability by adding and kneading a lightweight aggregate such as perlite having a closed cellular foam structure, reinforcing fiber, other aggregates, a plasticizer and water with cement.

CONSTITUTION: A fiber-reinforced lightweight cement composition is obtained by adding and mixing 30-120 pts.wt. lightweight aggregate such as perlite having a closed cellular foam structure of 0.2-0.8mm average grain diameter and 0.15-0.3g/cm<sup>3</sup> bulk density, 5-40 pts.wt. reinforcing fiber such as asbestos or pulp having 0.05-5mm fiber length, 50-150 pts.wt. other aggregates such as crushed stone having 0.01-2mm grain diameter and 1-10 pts.wt. plasticizer such as methyl cellulose with 100 pts.wt. cement such as blast furnace cement. An adequate amount of water is further added to the aforementioned cement composition and kneaded. The kneaded mixture is subsequently press formed and the resultant compact is cured under prescribed conditions, dried and hardened to afford a fiber-reinforced lightweight cement compact.

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[5]C04B001418; [5]C04B002800; [5]C04B003808;  
[5]C04B001418; [5]C04B001418; [5]C04B001446;  
[5]C04B002800; [5]C04B001438; [5]C04B001606  
Core: C04B001402 [2006-01]; C04B002800 [2006-01];  
C04B003808 [2006-01]  
Adv: C04B001418 [2006-01]; C04B002800 [2006-01];  
C04B003808 [2006-01]